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(609)633-1408

## State of New Jersey DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

Attachment

John J. Trela, Ph.D., Director

Lance R. Miller
Deputy Director
Responsible Party Remedial Action

	12/18/89
	MEMORANDUM
TO: THROUGH:	Distribution List  D. Kan pome P'E' Section Chief Bureau of Federal/Seese Case Management
FROM:	E.G. Kaup PE., Case Manager Bureau of Federal/S <del>ea</del> te Case Management
CASE:	LE Carponter
CASE COMPONENT	
SUBJECT:	Air Monitowns Results for Nov 89
	(Back up date to T.C. only)
The attac	hed type of document on the above named facility is for your:
[ <b>*</b> ]	Review and comment
	Information and/or file
[ ]	Action
[ j	Other
Should you please co	ou have any questions or if you are unable to meet the due date, intact me at 3-1455.
Activity	Code: EGK-2

Dis	tribu	tion:		
FYI ONL			*Comments Case Man	received by
[>	≪]	B. Dieperen	, Geologist Division of Water Resource	
[	]	J. Boyon	, Technical Coordinator BEERA/Division of Hazardou Site Mitigation	s
[	]	P. Paross	, Regulatory Officer Division of Regulatory Aff	airs
[	]		, Assistant Director Division of Regulatory Aff Enforcement Element	airs,
( )	<b>o</b> ]	G. Tomaccio	, Bureau of Community Relations	
ſ	1		, Division of Solid Waste	
[	]		, Division of Environmental Quality	
[	]	J. Josephs	, USEPA	
[	]	-	, DAG	
Į	]			
[	]		-	
*Th	Sc # nis i		*Response sent to EPA/RP on by the Case Manager and a	copy of the
COL	nplete	ed memorandum is forwarded to	the Section Chief and MIS.	

c. Section Chief (no attachments)
MIS (no attachments)



150 Mineral Spring Drive Dover, New Jersey 07801 201 361-3600 FAX 361-3800 Dover, New Jersey 07801

December 12, 1989

New Jersey Department of Environmental Protection Bureau of Federal Case Management Division of Hazardous Waste Management 401 East State Street Trenton, NJ 08625

ATTN: Ed Kaup

Addendum to November 1989 SUBJ:

"Report of Remedial Investigation Findings"

November Air Sample Analytical Results

L.E. Carpenter, Wharton, NJ

Dear Ed:

Enclosed are analytical results for November air samples collected at L.E. Carpenter as part of the Remedial Investigation. In accordance with the April 1988 ECRA Sampling Plan for the site, November was the last month for which air sampling and analysis was performed. These results were not included in the November 1989 "Report of Remedial Investigation Findings". A summary and discussion of the November air sample results, which supplements Section 5.5, "Air Sampling Results", of the above mentioned report are presented below. Attached are four summary tables for volatile organics and priority pollutant Two are calculation summary tables which supplement Appendix F and two are summary tables of detected analytical parameters which complete Tables 28 and 29 of the Report. Refer to Section 5.5.1, "General Overview", of the Report for descriptions of sampling locations, explanation of concentration calculations and EPA and OSHA standards.

Analysis of November air samples did not indicate the presence of volatile organic compounds except for benzene at AQ-1, AQ-2 and AQ-4 (refer to Table 28). However, benzene was also detected in the laboratory method blank.

Metal analysis performed on the air samples indicated 5.2 ug/m<sup>3</sup> of zinc at location AQ-3 (refer to Table 29). No other metals were detected at the four locations.

Analysis of air samples in November for volatile organics and priority pollutant metals did not indicate any airborne contamination attributable to the site. The trace concentrations of benzene detected are most likely due to normal ambient air conditions as affected by nearby traffic. There is no EPA or OSHA standard for zinc.

In view of the November analytical results, we conclude, as stated in the November 1989 report, that the site is having no adverse effect on ambient air quality at or downwind of the site. If you have any questions, please call.

Sincerely,

GEOENGINEERING, INC.

Joseph G. Savarese

Hydrogeologist

William W. Dunnell IV Project Manager

JGS/WWD/avm

cc R. Hahn

C. Anderson

M. Rodburg

TABLE 28: SUMMARY OF VOLATILE ORGANICS ANALYTICAL TESTING - AIR SAMPLING RESULTS
EPA METHOD 624
L.E. CARPENTER, WHARTON, BEY JERSEY.

PARAMETER	Hass (ng)	11/01/89  1 Conc. ng/a3+  1	Ess (ng)	# BD	Haza (ng)	1/01/49  1 Cocc. 29/03*  1 III  1 IIII  1 III  1 IIII	l Hass (ng)	1/01/89   Conc. mg/o3-	Hass (sq)  Lassessesses  U  U  U  U  U  U  U  U  U  U  U  U  U	11/01/83   Cooc. pg/o.   serversess
PARAMETER	HD HD HD HD HD HD HD HD HD HD	1 8D	\$	# BD	;					
Chloromethane I Bromomethane I Vinyl chloride I Chloroethane I Eethylene chloride I icetone I Carbon disulfide I 1.1-Dichloroethene I	ED E	1	# BD	1 80 1 80 1 80 1 80 1 80 1 80	01 10 02 1 03 1 04 1 05 1 06 1		1	1 HD 1 HD 1 HD 1 HD 1 HD	i 10 i 10 i 10 i 10 i 10	1 30 1 30 1 30 1 30 1 30
Brosomethane   I Vinyl chloride   I Chloroethane   I Eethylene chloride   I šcetone   I Carbon disulfide   I 1,1-Dichloroethene   I	ED E	1	# BD	1 80 1 80 1 80 1 80 1 80 1 80	01 10 02 1 03 1 04 1 05 1 06 1		1	1 HD 1 HD 1 HD 1 HD 1 HD	i 10 i 10 i 10 i 10 i 10	1 30 1 30 1 30 1 30 1 30
Brosomethane   I Vinyl chloride   I Chloroethane   I Eethylene chloride   I šcetone   I Carbon disulfide   I 1,1-Dichloroethene   I	ED E	1	# BD	1 80 1 80 1 80 1 80 1 80 1 80	01 10 02 1 03 1 04 1 05 1 06 1		1	1 HD 1 HD 1 HD 1 HD 1 HD	i 10 i 10 i 10 i 10 i 10	1 30 1 30 1 30 1 30 1 30
Vinyl chloride   Chloroethane   Ethylene chloride   Ectone   Carbon disulfide   I,1-Dichloroethene   I	ED E	1 80 1 80 1 80 1 RD 1 RD 1 RO 1 80 1 80 1 80	t BD t BD t BD t BD t BD t BD t BD	1	01 10 05 1 01 1 03 1 03 1 06 1	1 10 1 1 10 1 1 10 1 1 10 1	1 3D   1 8D   1 8D   1 8D	t 80 1 80 1 80	1 10 1 10 1 10 1 10 1 10	1 10 1 0 1 80 1 10 1 10
Chloroethane   1 Eethylene chloride   1 Acetone   1 Carbon disulfide   1 1,1-Dichloroethene   1	RD	RD R	# BD	1 BD 1 BD 1 BD 1 BD	1 20 1 20 1 20 1 20 1 20	1 10 1 1 10 1 1 10 1	011 D 014 1 015 1 016 1	t 110 1 20 1 20 1 20	1 110 1 170 1 170 1 180	1 20 1 20 1 20
Eethylene chloride   icetone   iCarbon disulfide   i.1-Dichloroethene   icetone   icet	ND HD	80   RD   RD   RO   RO   RD   RD	1 RD 1 BD 1 BD 1 BD	1 BD	1 10 10 10 10 10 10 10 10 10 10 10 10 10	1 150   1 150	10 10 10	1 BD 1	t 100 t 110 t 200	1 10 1 10 1 10
Acetone   Carbon disulfide   Car	HD HD HD	I RD  RD  RD  RD  RD  RD  RD  RD  RD	1 BD 1 BD 1 BD	1 BD	1 10 1 20 1 100	1 15	ED I	BD.	BD	1 10
Carbon disulfide	HO HO RD HO HO	B RD B BD B RD B RD B RD	1 80 1 80 1 80 1 80	1 HD 1 HD	I 100 I 100	1 10	I IID	BD.		
1,1-Dichloroethene	BD FD	1 80 1 80 1 80	1 BD 6 BD 1 BD	1 ND	1 100					
	BD I	I ND I ND	E BD	1 ND				t . PV	. 10	
1,1-Dichloroethane t	RD I	I BD	I BD		1 70	1 120	HD .	I BD	1 10	l 10
1,2-Dichloroethene (total)	BD	I ND		1 HD	1 30	1 10	80	1 . 100	100	į 20
Chloroforn	• • • • • • • • • • • • • • • • • • • •	1 20	1 80	i HD	1 10	1 20	BD :	1 150 1	1 80	1 10
1,2-Dichloroethane	nd i	ı AV	I BD	I ND	I BD	1 10	ED	1 8D	t BD	1 10
2-Eutanone		1 BD	1 BD	l RO	1 10	1 10	ED I	a no	1 80	1 30
1,1,1-Trichloroethane	HD	I ND	I BD	I RD	1 20	1 10	BD I	I ED	ֹ פוג ו	1 10
Carbon tetrachloride	80	I RD	I RD	1 ND	10	1 10	ID I	i do i	1 10	1 10
Vinyl acetate	30	l ko	E RD	1 80	ID ID	1 20	i da i	t MD i	1 90	1 . 10
Brosodichloromethane i	HO I	I AD	1 80	I IID	מ ו	1 20 1	) ED I	1 80 -	10	1 10
1.2-Dichloropropane 1	BD (	l BD	i RD	1 BD	i id	1 10 - (	I ID I	1 10	10	i d
cis-1,3-Dichloropropene	#D (	e da i	t BD	I ED	i BD	<b>i</b> 120 l	) NO I		<b>3</b> D.	1 20
Trichloroethene	∄D` (	1 BO 1	i RD	I BD	10	<b>)</b> 30 (				1 10
Dibrosochlorosetbane	BD I	OH 1	I RD	i RD I	10	<b>)</b> 300 (	ND I	1 10 -	1 10	1 10
1,1,2-Trichloroethane	BD I	I BD	I D	1 80 1	I ID	1 20 1	L BD :	i BD	10	i id
Benzene 1	1.4 Jp	! 133.1 p	1.3 Jp	1 124.6 p	<b>10</b>	1 61 1	23.0 p	1 2366.3 p	1 31.0 p	1 3189.3 p
trans-1,3-Dichloropropene 1	i di	I RO	RD RD	I DO	100	1 100 H	DE I	1 10	100	1 20
Brosoforn . I	RD (	t tid i	i kd	I RD I	10	1 20 1	ED I	I ID	1 20	1 10
4-Hethyl-2-pentanone	RD (	I RD	I AD	i 80 i	1 10	(d)	30			1 10
Tetrachloroethene 1	BD (	t RD	k p	l on i	100	1 20	NO I	1 10 1	, וס	į m
Toluene	KD (	t BD	RD ND	1 90 1	I 100	1 00	RD I	I ID !	1 10	1 10
Calorobenzene	) OIL	l ca l	) JD	1 BD [	10	<b>1 5</b> 0 (	ND	10 (	10	; D
Ethylbenzene	3D (	l BO	BD BD	I D I	10	100	BD I	1 10	I ID	[ 30
Styrene	10 I	ED I	BD	I AD I	100	. 10	CK I	OE. 1	100 (1 1 100 (1	\$ 80 t 20
Iylene (total)	HD OR	1 BD (	ND ND	I ED I	100	1 20 1	20		. 44	. <i>a</i> y
TOTAL TARGETED VOLATILE ORGANICS	ED I	i da i	I HD		160     160	1 10 I	ED	ED 1	, ID 1	. 100
AVINE TURNSTER ARTERISE AND THE TANK TH	<i>50</i>	טא ו ו	, 80	י עא ו י	ו עם ו	י שם ו 1				i -
	- 1		) 		1			i		i
BON-TARGETED VOLATILE ORGANICS	:	, (	)		) ! ) !				1	i
Carbon oxide gulfide	ED .	BD I	51.7	1 4956.7 I	94.0	9515.7	89.0	9156.4	86.0	8847.7
Unknown i	AD 1	BD I	ND	1 4936./ I	21.0	1 2125.9 I	20 I	10 10	319.0	32815.9
1	, un 1	יים ו	עם	י עא נ נ נ	: #1V	, 4143-7 (  -	""			1
TOTAL HON-TARGETED VOLATILE ORGANICS	ED (	. מא	51.7		115.0	1 11641.6	89.0	9156.4	405.0	41666.6

BOTES: ND - Not detected.

FROTROTE: Chain-of-Custody indicated that samples 1-VA thru 4-VB were to be analyzed for VO's; the "B" samples are duplicates of the "A" samples. Since "A" samples were found to have some of the above parameters the duplicate namples ("B" samples) were not analyzed. Although acetone was detected in 1-VA, 3-VA and 4-VA the "B" (duplicate) samples were not analyzed because the laboratory believed the occurance of the acetone was due to field sampling contamination. Acetone was not used during sampling.

p - Compound also found in laboratory blank.

J - Trace concentrations detected below reporting limit or is an estimated concentration.

<sup>• -</sup> Calculated based on sampling flow rate and reported mass;

refer to Appendix F for supporting documentation.

<sup>\*\*\* -</sup> Total includes compounds detected at trace concentrations (J), excludes compounds found in lab blank (p).

TABLE 29: SUMMARY OF PRIORITY POLLUTANT METALS TESTING - AIR SAMPLING RESULTS L.E. CARPENTER, WHARTON, NEW JERSEY.

GeoEngineering, Inc. December 1989

											.4				
SAMPLE ID:	1		AQ-		1		-QA		I,	A	<b>0-</b>	1	AQ-		l
	. ]	1H,	HA, MB		1	2H,	MA,MB		ı	ЗН, НА	, HB	I 4H, H	A,HB		l
DATE SAMPLED:	1		02/89		1		02/89		1	11/02		I 11/0	2/89		1
	I H	ass (ug)		onc.ug/m34	1	Mass (ug)	1 0	onc.ug/m3*	I	Kass (ug)	i Conc.ug/m3≥	i Hass (ug)	I Conc.	ug/a3*	I
:::::::::::::::::::::::::::::::::::::::	:::: ::::		==   ===	:======	:== :	-			= ] :			==========	= ======		
PARAMETER	1.		i		i		ı		1		1 % 3	1	1		
	į		Ī		Ī		ı		ı	18. E.S.	1	ı	1		1
	ı		Ì		i		1		1		1: .	· .	1		1
Antimony	I	ND	I	ND	1	ND	1	ND	١	ND	I ND	i ND	1	ND	i
Arsenic	ŀ	ND	ı	ND	1	ND	1	ND	1	ND	I ND	I ND	1	סא	1
Beryllium	ı	ND	i	ND	1	ND	1	ND	ı	ND	I ND	I KD	1	ND	1
Cadnium	1	ИD	1	ND	- 1	ND	1	ND	1	ND	I ND	1 ND	1.	KD	!
Chronium	I	HD	1	ND	1	ND	1	ND	4		l — ND	I ND	1	ND.	I
Copper	į.	ND	l	ND	1	ND	ı	ND	1	ND	l RD	I ND	1	ND	i
Lead	1	ND	Ì	ND	1	ND	Ì	ND	1	ND	1 ND	I ND	1 '	ND	]
Mercury	ı	ND	ı	ND	1	ND	ì	· ND	I	ND	I ND	i ND	1	ND	1
Nickel	1	ND	i	ND	1	ND	t	ND	1	ND	l # ND	I ND '	.1	ND	1
Selenium	ì	ND	Ì	ND	Ī	ND	1	ND	ì	ND	I ND	I ND	1	ND	ľ
Silver	i	ND	i	ND	1	ND	i	ND	i	ND	I ND	I ND	1	ND	l
Thallium	i	ND	i	ND	i	ND	i	ND	i	ND	I ND	I ND		ND	i
Zinc	1	ND	i	Dא	i	ND	i	ND	i	1.0	5.2	I RD		KD	
	i		i	•••	i		i	•••	i		1	1	i		
	•••		•		•		•		•	10 A		•	•		•

NOTES: ND - Not detected.

\* - Calculated based on sampling flow rate and lab reported mass; refer to Appendix F for supporting documentation.

FOOTNOTE: Chain-of-Custody indicated that samples 1HA thru 4MB were to be tested for all Priority
Pollutant Hetals (except mercury), of the "B" samples were duplicates of the "A" samples.

Instead of analyzing the "B" samples as duplicates, the "B" samples were used for detection of Arsenic,
Selenium, Thallium, and the "A" samples were analyzed for the remaining Priority Pollutant
Hetals (except for mercury). Hercury samples were designated as 1H through 4H.

APPENDIX F

## CALCULATION SUMMARY TABLE FOR AIR SAMPLES - VOLATILES L.E. CARPENTER, WHARTON, NEW JERSEY

GeoEngineering, Inc.
December 1989

	Honth	Sampling Parameter	Location	Flow Rate * (cm3/min)	Volume Pumped (m3)	Reported Hass by lab(ng)	Conc ng/n3
========						Benzene	
	November	VO	1	21.91	0.01	1.4	133.1
	November	VO	2	21.73	0.01	1.3 miles	124.6
	November	VO	3	20.58	0.01	•	••
	November	VO	4	20.25	0.01	23.0	2366.3
	November	VO	4b	20.25	0.01	31.0	3189.3
			:			Carbon oxide su	lfide
1124	November	· VO	1	21.91	0.01	and the residence !	
	November	· VO	2	21.73	0.01	51.7	4956.7
12	November	VO	.3	20.58	0.01	94.0	9515.7
	November	VO.	4	20.25	0.01		9156.4
. •	November	VO	4b	20.25	0.01	86.0	8847.7
						Unknown	and sta
4 6	November	VO	1	21.91	0.01		
	November	VO	2	21.73	0.01	and the American section of the sect	elak yan di .
	November	VO	3	20.58	0.01	21.0	2125.9
	November	VO	4	20.25	0.01		ing of the second
7	November	AO	4b	20.25	0.01	220.0	22633.7
:						Unknown	
	November	VO	1 .	21.91	0.01		
	November	VO ·	2	21.73	0.01	•	••
	November	VO	3	20.58	0.01		*** ***
	November	` vo	4	20.25	0.01		
	November	VO	4b -	20.25	0.01	99.0	10185.2

Volume Pumped(m3) = (Flow rate (cm3/min) \* 8 hours \* 60 min) .000001

FOOTNOTE: Only those volatile organic compounds detected for a given month were tabulated; volatile organic compounds not listed for a given month were not detected.

NOTES • - Flow rate measured in field over 8 hour period.

<sup>-- -</sup> Not detected.

APPENDIX F

CALCULATION SUMMARY TABLE FOR AIR SAMPLES - METALS
L.E. CARPENTER, WHARTON, NEW JERSEY

GeoEngineering, Inc.
December 1989

 Month	Sampling * Parameter	Location	Flow Rate** (cm3/min)	Volume Pumped (m3)	Reported Hass Conc by lab(ug) ug/m3
 	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
					Zinc
November	<b>Hetals</b>	1	399.60	0.19	
November	<b>Hetals</b>	2	401.90	0.19	reconstruction of the second second
November	<b>Hetals</b>	3	399.40	0.19	1.0
November	<b>Metals</b>	4	398.70	0.19	

HOTES: • - Includes all metals except mercury. Hercury was not detected in any of the samples.

- 44 Flow rates as measured in the field over an 8 hour period.
- -- Not detected.

Volume Pumped(m3) = (Flow rate (cm3/min) \* 8 hours \* 60 min) .000001

FOOTNOTE: Only those metals detected for a given month were tabulated; metals not listed for a given month were not detected.